INVENTOR SEARCH

=> d ibib abs ind l25 1-1

L25 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:649643 HCAPLUS Full-text
DOCUMENT NUMBER: 125:284923
TITLE: Aerosols containing nanoparticle dispersions
INVENTOR(S): **Wood, Ray W.; Decastro, Lan; Bosch, H. William**
PATENT ASSIGNEE(S): Nanosystems L.L.C., USA
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9625918	A1	19960829	WO 1996-US2346		19960223
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI					
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE					
CA 2213638	A1	19960829	CA 1996-2213638		19960223
CA 2213638	C	20040504			
AU 9649906	A	19960911	AU 1996-49906		19960223
EP 810853	A1	19971210	EP 1996-906566		19960223
EP 810853	B1	20040825			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE					
JP 2001502291	T	20010220	JP 1996-525798		19960223
AT 274341	T	20040915	AT 1996-906566		19960223
US 6264922	B1	20010724	US 1997-948216		19971009
US 2004057905	A1	20040325	US 2003-667472		20030923
PRIORITY APPLN. INFO.:			US 1995-394103	A	19950224
			US 1996-589681	A	19960119
			WO 1996-US2346	W	19960223
			US 1997-948216	A3	19971009
			US 2000-577489	A1	20000525

AB An aerosol comprising droplets of an aqueous dispersion of nanoparticles, said nanoparticles comprising insol. therapeutic or diagnostic agent particles having a surface modifier on the surface is disclosed. A method for making the aerosol and methods for treatment and diagnosis, especially of edema, using the aerosol is also disclosed.

IC ICM A61K009-12
CC 63-6 (Pharmaceuticals)
ST aerosol nanoparticle dispersion
IT Pharmaceutical dosage forms
(nanocapsules, aerosols containing nanoparticle dispersions)
IT Pharmaceutical dosage forms
(sprays, aerosols containing nanoparticle dispersions)
IT 4419-39-0, Beclomethasone 5534-09-8, Beclomethasone dipropionate 182633-31-4, Win 68209
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(aerosols containing nanoparticle dispersions)

RESULTS FROM REGISTRY AND CAPLUS

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=> => d que stat l27
L1            13 SEA FILE=REGISTRY ABB=ON  (GELATIN OR CASEIN OR GUM ACACIA OR
                 CHOLESTEROL OR TRAGACANTH OR STEARIC ACID OR BENZALKONIUM
                 CHLORIDE OR CALCIUM STEARATE OR GLYCEROL MONOSTEARATE OR
                 CETOSTEARYL ALCOHOL OR CETOMACROGOL OR SORBITAN OR POLYOXYETHYL
                 ENE OR CASTOR OIL OR POLYETHYLENE GLYCOLS OR POLYOXYETHYLENE
                 STEARATES)/CN
L2             1 SEA FILE=REGISTRY ABB=ON  "POLYETHYLENE GLYCOL"/CN
L3            14 SEA FILE=REGISTRY ABB=ON  L1 OR L2
L4             4 SEA FILE=REGISTRY ABB=ON  (SILICON DIOXIDE OR PHOSPHATES OR
                 SODIUM DODECYLSULFATE OR CARBOXYMETHYLCELLULOSE CALCIUM OR
                 CARBOXYMETHYLCELLULOSE SODIUM OR METHYLCELLULOSE OR HYDROXYETHY
                 LCELLULOSE OR HYDROXYPROPYLCELLULOSE OR HYDROXYPROPYLMETHYLCELL
                 ULOSE PHTHALATE OR CELLULOSE OR MAGNESIUM ALUMINUM SILICATE)/CN

L5            14 SEA FILE=REGISTRY ABB=ON  (TRIETHANOLAMINE OR POLYVINYL
                 ALCOHOL OR POLYVINYLPYRROLIDONE OR TYLOXAPOL OR POLYMERS OR
                 POLYOXAMINE OR DEXTRAN OR LECITHIN OR SODIUM SULFOSUCCINIC
                 ACID OR SODIUM LAURYL SULFATE OR SORBITAN OR SUCROSE STEARATE
                 OR SUCROSE DISTEARATE OR ETHYLENE OXIDE OR PROPYLENE OXIDE OR
                 PEO OR PBO)/CN
L6             1 SEA FILE=REGISTRY ABB=ON  PEO/CN
L7             4 SEA FILE=REGISTRY ABB=ON  PBO/CN
L8            30 SEA FILE=REGISTRY ABB=ON  L3 OR L4 OR L5 OR L6 OR L7
L9        470624 SEA FILE=HCAPLUS ABB=ON  GELATIN OR CASEIN OR GUM ACACIA OR
                 CHOLESTEROL OR TRAGACANTH OR STEARIC ACID OR BENZALKONIUM
                 CHLORIDE OR CALCIUM STEARATE OR GLYCEROL MONOSTEARATE OR
                 CETOSTEARYL ALCOHOL OR CETOMACROGOL OR SORBITAN OR POLYOXYETHYL
                 ENE OR CASTOR OIL OR POLYETHYLENE GLYCOLS OR POLYOXYETHYLENE
                 STEARATES
L10       901629 SEA FILE=HCAPLUS ABB=ON  L8
L11       539530 SEA FILE=HCAPLUS ABB=ON  SILICON DIOXIDE OR PHOSPHATES OR
                 SODIUM DODECYLSULFATE OR CARBOXYMETHYLCELLULOSE CALCIUM OR
                 CARBOXYMETHYLCELLULOSE SODIUM OR METHYLCELLULOSE OR HYDROXYETHY
                 LCELLULOSE OR HYDROXYPROPYLCELLULOSE OR HYDROXYPROPYLMETHYLCELL
                 ULOSE PHTHALATE OR CELLULOSE OR MAGNESIUM ALUMINUM SILICATE
L12      1184265 SEA FILE=HCAPLUS ABB=ON  TRIETHANOLAMINE OR POLYVINYL ALCOHOL
                 OR POLYVINYLPYRROLIDONE OR TYLOXAPOL OR POLYMERS OR POLYOXAMINE
                  OR DEXTRAN OR LECITHIN OR SODIUM SULFOSUCCINIC ACID OR SODIUM
                 LAURYL SULFATE OR SORBITAN OR SUCROSE STEARATE OR SUCROSE
                 DISTEARATE OR ETHYLENE OXIDE OR PROPYLENE OXIDE OR PEO OR PBO
L13      2457548 SEA FILE=HCAPLUS ABB=ON  L9 OR L10 OR L11 OR L12
L14         3800 SEA FILE=HCAPLUS ABB=ON  L13 AND (?RESP? OR ?LUNG?)(4A)(?ILLNES
                 S? OR ?DISEASE? OR ?DISTRESS?)
L16          257 SEA FILE=HCAPLUS ABB=ON  L14 AND (?AEROSOL? OR ?NEBULIZ?)
L17          129 SEA FILE=HCAPLUS ABB=ON  L16 AND (?ASTHMA? OR ?EMPHYSEMA? OR
                 ?RESP?(W)?DISTRESS? OR ?BRONCHITIS? OR ?CYSTIC?(W)?FIBROSIS?)
L18           10 SEA FILE=HCAPLUS ABB=ON  L17 AND ?SOLUBIL?
L19           32 SEA FILE=HCAPLUS ABB=ON  L17 AND ?PARTICLE?(3A)?SIZE?
L20           39 SEA FILE=HCAPLUS ABB=ON  L18 OR L19
L27            3 SEA FILE=HCAPLUS ABB=ON  L20 AND (PRD<19950224 OR PD<19950224)


=> d ibib abs l27 1-3

L27  ANSWER 1 OF 3  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:        1990:185806  HCAPLUS  Full-text
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DOCUMENT NUMBER: 112:185806
TITLE: β-adrenergic agonist and thyroid hormone-containing pharmaceutical composition for treatment of lung obstructions
INVENTOR(S): Smith, Ulf Per Gustav; Wesslau, Christian
PATENT ASSIGNEE(S): Swed.
SOURCE: PCT Int. Appl., 9 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8907454	A1	19890824	WO 1989-SE57	19890210 <--
W: DK, FI, JP, NO, US				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
SE 8800461	A	19890812	SE 1988-461	19880211 <--
SE 461013	B	19891218		
SE 461013	C	19900412		
EP 357725	A1	19900314	EP 1989-902559	19890210 <--
EP 357725	B1	19920415		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
JP 03500294	T	19910124	JP 1989-502359	19890210 <--
AT 74767	T	19920515	AT 1989-902559	19890210 <--
NO 8904030	A	19891009	NO 1989-4030	19891009 <--
DK 8905005	A	19891010	DK 1989-5005	19891010 <--

PRIORITY APPLN. INFO.:

SE 1988-461	A	19880211 <--
EP 1989-902559	A	19890210 <--
WO 1989-SE57	W	19890210 <--

AB A pharmaceutical composition for therapeutic and/or prophylactic treatment of lung obstructions consists of a therapeutically active amount of β-adrenergic agonist and that of active thyroid hormones (preferred ratio 10:1-1:1). Thus, terbutaline sulfate and triiodothyronine were granulated with ethanol/water containing 1-2% of sorbitan, dried, and then ground to a fine powder having a particle size suitable for being administered in the form of an inhalation aerosol for the local treatment of the lungs. The molar ratio of terbutaline:triiodothyronine was 50:50. The preparation is therapeutic as well as prophylactic treatment for asthma patients.

L27 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1983:581351 HCAPLUS Full-text
DOCUMENT NUMBER: 99:181351
TITLE: Ultrasonic and jet aerosolization of phospholipids and the effects on surface activity
AUTHOR(S): Marks, L. B.; Notter, R. H.; Oberdorster, G.; McBride, J. T.
CORPORATE SOURCE: Sch. Med., Univ. Rochester, Rochester, NY, USA
SOURCE: Pediatric Research (1983), 17(9), 742-7
CODEN: PEREBL; ISSN: 0031-3998
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Surface active aerosols were produced from aqueous dispersions of mixed calf lung lipids (CLL), extracted from bovine lung lavage. Particle size distributions were measured as a function of humidity for 2 types of aerosol generators: ultrasonic and jet. Lipid dispersions before aerosolization were prepared by sonication in an ice bath and by mech. vortexing. Over a range of high humidity >60-70%, ultrasonic nebulization gave CLL aerosols with mass

median aerodynamic diams. (MMAD) of 1.4 μm, compatible with predicted alveolar deposition fractions of 0.2-0.3 according to current deposition models. For humidities of 30-95%, jet nebulization gave MMAD values of 0.4-0.5 μm, which have lower predicted alveolar deposition. The surface pressure-time (π - t) adsorption characteristics at 35° of CLL dispersions prepared initially by vortexing or sonication were not significantly affected by ultrasonic nebulization over 1-2 h. In addition, the dynamic surface tension lowering of both kinds of CLL dispersion was not affected by ultrasonic nebulization (min. surface tension <1 dyne/cm at 37° and 100% humidity). Current interest in the treatment of the respiratory distress syndrome with exogenous surfactant replacement has focused largely on the delivery of surfactants to infants by tracheal instillation at birth. However, the ability to form multicomponent surfactant aerosols with appreciable alveolar deposition fractions and high surface activity may help to expand the utility of replacement therapy to patients with aerated lungs.

L27 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1967:5771 HCAPLUS Full-text
DOCUMENT NUMBER: 66:5771
ORIGINAL REFERENCE NO.: 66:1159a,1162a
TITLE: Dexamethasone aerosols
INVENTOR(S): Macek, Thomas J.
PATENT ASSIGNEE(S): Merck and Co., Inc.
SOURCE: U.S., 2 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3282791		19661101	US	19620629 <--
GB 1143440			GB	

AB Described are self propellent antiinflammatory di-Na dexamethasone 21-monophosphate (I) compns. for inhalation therapy containing 0.01-2 weight % of sorbitan trioleate as dispersing agent; 0.001-0.18 weight % of I is used in particle sizes of 1-10 μ. A Freon-type propellent having vapor pressure of 15-70 (20-30 preferred) lb./sq.in. at 70°F. is used; e.g., 65 weight % of ClF2CCF2-Cl and 34.56 weight % Cl2CF2. With these aerosols, asthmatics need inhale only 0.1 the amount required orally.

RESULTS FROM MEDLINE, BIOSIS, EMBASE, AND DRUGU

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=> d que stat l29
L1            13 SEA FILE=REGISTRY ABB=ON  (GELATIN OR CASEIN OR GUM ACACIA OR
                 CHOLESTEROL OR TRAGACANTH OR STEARIC ACID OR BENZALKONIUM
                 CHLORIDE OR CALCIUM STEARATE OR GLYCEROL MONOSTEARATE OR
                 CETOSTEARYL ALCOHOL OR CETOMACROGOL OR SORBITAN OR POLYOXYETHYL
                 ENE OR CASTOR OIL OR POLYETHYLENE GLYCOLS OR POLYOXYETHYLENE
                 STEARATES)/CN
L2             1 SEA FILE=REGISTRY ABB=ON  "POLYETHYLENE GLYCOL"/CN
L3            14 SEA FILE=REGISTRY ABB=ON  L1 OR L2
L4             4 SEA FILE=REGISTRY ABB=ON  (SILICON DIOXIDE OR PHOSPHATES OR
                 SODIUM DODECYLSULFATE OR CARBOXYMETHYLCELLULOSE CALCIUM OR
                 CARBOXYMETHYLCELLULOSE SODIUM OR METHYLCELLULOSE OR HYDROXYETHY
                 LCELLULOSE OR HYDROXYPROPYLCELLULOSE OR HYDROXYPROPYLMETHYLCELL
                 ULOSE PHTHALATE OR CELLULOSE OR MAGNESIUM ALUMINUM SILICATE)/CN
L5            14 SEA FILE=REGISTRY ABB=ON  (TRIETHANOLAMINE OR POLYVINYL
                 ALCOHOL OR POLYVINYLPYRROLIDONE OR TYLOXAPOL OR POLYMERS OR
                 POLYOXAMINE OR DEXTRAN OR LECITHIN OR SODIUM SULFOSUCCINIC
                 ACID OR SODIUM LAURYL SULFATE OR SORBITAN OR SUCROSE STEARATE
                 OR SUCROSE DISTEARATE OR ETHYLENE OXIDE OR PROPYLENE OXIDE OR
                 PEO OR PBO)/CN
L6             1 SEA FILE=REGISTRY ABB=ON  PEO/CN
L7             4 SEA FILE=REGISTRY ABB=ON  PBO/CN
L8            30 SEA FILE=REGISTRY ABB=ON  L3 OR L4 OR L5 OR L6 OR L7
L9        470624 SEA FILE=HCAPLUS ABB=ON  GELATIN OR CASEIN OR GUM ACACIA OR
                 CHOLESTEROL OR TRAGACANTH OR STEARIC ACID OR BENZALKONIUM
                 CHLORIDE OR CALCIUM STEARATE OR GLYCEROL MONOSTEARATE OR
                 CETOSTEARYL ALCOHOL OR CETOMACROGOL OR SORBITAN OR POLYOXYETHYL
                 ENE OR CASTOR OIL OR POLYETHYLENE GLYCOLS OR POLYOXYETHYLENE
                 STEARATES
L10       901629 SEA FILE=HCAPLUS ABB=ON  L8
L11       539530 SEA FILE=HCAPLUS ABB=ON  SILICON DIOXIDE OR PHOSPHATES OR
                 SODIUM DODECYLSULFATE OR CARBOXYMETHYLCELLULOSE CALCIUM OR
                 CARBOXYMETHYLCELLULOSE SODIUM OR METHYLCELLULOSE OR HYDROXYETHY
                 LCELLULOSE OR HYDROXYPROPYLCELLULOSE OR HYDROXYPROPYLMETHYLCELL
                 ULOSE PHTHALATE OR CELLULOSE OR MAGNESIUM ALUMINUM SILICATE
L12      1184265 SEA FILE=HCAPLUS ABB=ON  TRIETHANOLAMINE OR POLYVINYL ALCOHOL
                 OR POLYVINYLPYRROLIDONE OR TYLOXAPOL OR POLYMERS OR POLYOXAMINE
                  OR DEXTRAN OR LECITHIN OR SODIUM SULFOSUCCINIC ACID OR SODIUM
                 LAURYL SULFATE OR SORBITAN OR SUCROSE STEARATE OR SUCROSE
                 DISTEARATE OR ETHYLENE OXIDE OR PROPYLENE OXIDE OR PEO OR PBO
L13      2457548 SEA FILE=HCAPLUS ABB=ON  L9 OR L10 OR L11 OR L12
L14         3800 SEA FILE=HCAPLUS ABB=ON  L13 AND (?RESP? OR ?LUNG?)(4A)(?ILLNES
                 S? OR ?DISEASE? OR ?DISTRESS?)
L16          257 SEA FILE=HCAPLUS ABB=ON  L14 AND (?AEROSOL? OR ?NEBULIZ?)
L17          129 SEA FILE=HCAPLUS ABB=ON  L16 AND (?ASTHMA? OR ?EMPHYSEMA? OR
                 ?RESP?(W)?DISTRESS? OR ?BRONCHITIS? OR ?CYSTIC?(W)?FIBROSIS?)
L18           10 SEA FILE=HCAPLUS ABB=ON  L17 AND ?SOLUBIL?
L19           32 SEA FILE=HCAPLUS ABB=ON  L17 AND ?PARTICLE?(3A)?SIZE?
L20           39 SEA FILE=HCAPLUS ABB=ON  L18 OR L19
L28           17 SEA L20
L29           16 DUP REMOV L28 (1 DUPLICATE REMOVED)


=> d ibib abs l29 1-16

L29  ANSWER 1 OF 16      MEDLINE on STN                    DUPLICATE 1
ACCESSION NUMBER:    2007573186      MEDLINE  Full-text
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DOCUMENT NUMBER: PubMed ID: 17894533
TITLE: Factors controlling particle size during nebulization of DNA-polycation complexes.
AUTHOR: Lynch J; Behan N; Birkinshaw Colin
CORPORATE SOURCE: Department of Materials Science, University of Limerick, Limerick, Ireland.
SOURCE: Journal of aerosol medicine : the official journal of the International Society for Aerosols in Medicine, (2007 Fall) Vol. 20, No. 3, pp. 257-68.
Journal code: 8809251. ISSN: 0894-2684.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Health Technology
ENTRY MONTH: 200710
ENTRY DATE: Entered STN: 27 Sep 2007
Last Updated on STN: 31 Oct 2007
Entered Medline: 30 Oct 2007

AB Pulmonary gene therapy has the potential to treat or cure respiratory diseases such as cystic fibrosis. Much work has focused on the delivery of genes to the lung using viral vectors with varying degrees of success. Viral vectors are problematic and undesirable for use in the lung because they can provoke an acute immune response. This study has focused on the characterization of nonviral, polymer-based gene vectors for use with nebulizers. Calf thymus DNA has been used as a model, and was complexed with each of the three polycations; 22 kDa linear polyethyleneimine, 25 kDa branched polyethyleneimine, and 29.5 kDa polylysine using water, glucose solution, and phosphate-buffered saline (PBS) as carrier liquids. Fourier transform infrared spectroscopy has shown that the DNA retains the B form during the complex formation. The complexes prepared at N:P ratios of 10, have been nebulized using a vibrating plate nebulizer and the particle size and Zeta potentials measured before and after nebulization. The particle size distributions of the DNA complexes prepared in water and glucose solution were unimodal before and after nebulization with a small increase in particle size following nebulization. Choice of complexing polymer is shown to have only a small effect on particle size with the dominant effect coming from the ionic character of the dispersion fluid. Complexes prepared in PBS, although originally unimodal, showed pronounced agglomeration on nebulization. With all polymers in water or glucose solution, the Zeta potential increases after nebulization, but with PBS as the carrier liquid the potential falls and is clearly associated with the observed agglomeration. Gel electrophoresis shows that the complexing polymers protect the DNA through the nebulization process in all cases.

L29 ANSWER 2 OF 16 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2007272193 EMBASE Full-text
TITLE: Externalities of fugitive dust.
AUTHOR: Mohamed A.-M.O.; Bassouni K.M.
CORPORATE SOURCE: A.-M.O. Mohamed, Department of Civil and Environmental Engineering, UAE University, P.O. Box 17555, Al Ain, United Arab Emirates. Mohamed.a@uaeu.ac.ae
SOURCE: Environmental Monitoring and Assessment, (Jul 2007) Vol. 130, No. 1-3, pp. 83-98.
Refs: 120
ISSN: 0167-6369 E-ISSN: 1573-2959 CODEN: EMASDH
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis

016 Cancer
035 Occupational Health and Industrial Medicine
046 Environmental Health and Pollution Control
052 Toxicology

LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 15 Jun 2007
Last Updated on STN: 15 Jun 2007

AB It is known that fugitive dust can cause human health and environmental problems, alone or in combination with other air pollutants. These problems are referred to as 'external costs' that have been traditionally ignored. However, there is a growing interest towards quantifying externalities to assist policy and decision-making. With this in mind, the present study aimed at discussing the environmental regulations that deal with fugitive dust, the impact of fugitive dust on human health and global climate system, and the available methods for calculating fugitive dust externalities. The damage cost associated with human health and global environmental problems was predicted based on the environmental strategy priority model. The damage cost estimated by the model ranged from 40 to 374 EUR/kg of emitted fugitive dust with a mean value of 120 EUR/kg of emitted fugitive dust. It was also found that PM(2.5) and PM(10) have contributed to about 60% and 36% of the estimated damage cost, respectively. The remaining 4% was attributed to both nitrate and sulfate aerosols. .COPYRGT. Springer Science+Business Media B.V. 2006.

L29 ANSWER 3 OF 16 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2007108523 EMBASE Full-text
TITLE: Inhalation aspects of therapeutic aerosols.
AUTHOR: Leach C.L.
CORPORATE SOURCE: C.L. Leach, Lovelace Respiratory Research Institute, 2425 Ridgecrest Drive, SE, Albuquerque, NM 87108, United States. cleach@lrri.org
SOURCE: Toxicologic Pathology, (Jan 2007) Vol. 35, No. 1, pp. 23-26.
Refs: 25
ISSN: 0192-6233 E-ISSN: 1533-1601 CODEN: TOPADD
PUBLISHER IDENT.: 770779941
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
038 Adverse Reactions Titles
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 27 Mar 2007
Last Updated on STN: 27 Mar 2007

AB The pulmonary route of drug delivery can provide an excellent alternative to other routes both for local lung disease as well as systemic delivery. The year 2006 marks the 50th year since the invention of metered dose inhalers, yet inhalation is a very much underutilized route of delivery, possibly because inhalation drug development is perceived as being too difficult and expensive. However with proper knowledge these purported difficulties can be overcome. The process begins with identifying the target tissue and then utilizing technologies such as particle size adjustments through formulation techniques and delivery devices to most efficiently deliver the desired dose. There are a variety of new and existing inhaled excipients available to accomplish this goal. The active molecule can also be modified to increase

solubility, decrease immunogenicity, and protect it from unwanted metabolism using PEGylation. Sustained release of an inhaled drug is also possible using biocompatible matrices such as oligolactic acid. Copyright .COPYRGT. by the Society of Toxicologic Pathology.

L29 ANSWER 4 OF 16 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2006291106 EMBASE Full-text
TITLE: Alternative propellant aerosol delivery systems.
AUTHOR: Smyth H.D.C.; Leach C.L.
CORPORATE SOURCE: H.D.C. Smyth, College of Pharmacy, MSC 09 5360, University of New Mexico, Albuquerque, NM 87131, United States
SOURCE: Critical Reviews in Therapeutic Drug Carrier Systems, (2005) Vol. 22, No. 6, pp. 493-534.
Refs: 156
ISSN: 0743-4863 CODEN: CRTSEO
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review; (Review)
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
038 Adverse Reactions Titles
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 3 Jul 2006
Last Updated on STN: 3 Jul 2006

AB The year 2006 represents the 50th anniversary of the pressurized metered dose inhaler. With most technologies, 50 years represents a significant time span for technology evolution and modification, but with propellant-driven metered dose inhalers, the pace of change has been relatively slow. We are now in the era of alternative propellant aerosol delivery systems, but at this 50-year juncture, what are the characteristics of these systems and what are the prospects for future advances? This review will consider alternative propellant aerosol delivery systems broadly from their inception through future opportunities and challenges. .COPYRGT.2005 by Begell House, Inc.

L29 ANSWER 5 OF 16 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2005038045 EMBASE Full-text
TITLE: Propellant-driven metered-dose inhalers for pulmonary drug delivery.
AUTHOR: Smyth H.D.C.
CORPORATE SOURCE: Dr. H.D.C. Smyth, Univ. of N. Carolina at Chapel Hill, School of Pharmacy, Chapel Hill, NC 27599, United States
SOURCE: Expert Opinion on Drug Delivery, (Jan 2005) Vol. 2, No. 1, pp. 53-74.
Refs: 170
ISSN: 1742-5247
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; General Review; (Review)
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
027 Biophysics, Bioengineering and Medical Instrumentation
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles

039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 4 Feb 2005
Last Updated on STN: 4 Feb 2005

AB The current market for pulmonary drug delivery is at a bottleneck. The therapeutic advantages of inhalation aerosols, and the potential for the lungs as a route for systemically acting drugs, vaccines and gene therapeutic agents, have resulted in a rapid growth of the industry. Alongside this, the environment of inhaler design and formulation has changed markedly in recent years. Environmental concerns over propellants, the commercial success of dry powder inhalers, and the apparent lack of advancement of propellant-driven metered-dose inhalers (pMDIs) has led to a less clear future for these devices. This review critically assesses these pressures and also potential opportunities for the pMDI. It is proposed that the future role of pMDIs will be determined by several important forces that can be classified under 'technology development' or 'market climate' categories. Technology development forces will be strengthened by the ability of the industry to have a systematic understanding of mechanisms of spray formation, perform subsequent and continued device and formulation advances, and a focus on all patient groups: particularly paediatric and geriatric populations. The ability to succeed in these areas will be largely determined by the willingness to invest in fundamental research of pMDI technologies. .COPYRGT. 2005 Ashley Publications Ltd.

L29 ANSWER 6 OF 16 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2004045871 EMBASE Full-text
TITLE: Pulmonary responses to welding fumes: Role of metal constituents.
AUTHOR: Antonini J.M.; Taylor M.D.; Zimmer A.T.; Roberts J.R.
CORPORATE SOURCE: Dr. J.M. Antonini, Health Effects Laboratory Division, Natl. Inst. Occup. Safety and Hlth., 1095 Willowdale Road (M/S 2015), Morgantown, WV 26505, United States. jga6@cdc.gov
SOURCE: Journal of Toxicology and Environmental Health - Part A, (13 Feb 2004) Vol. 67, No. 3, pp. 233-249.
Refs: 60
ISSN: 1528-7394 CODEN: JTEHD6
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article; (Conference paper)
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
035 Occupational Health and Industrial Medicine
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20 Feb 2004
Last Updated on STN: 20 Feb 2004

AB It is estimated that more than 7 million workers worldwide perform some type of welding as part of their work duties. Epidemiology studies have shown that a large number of welders experience some type of respiratory illness. Respiratory effects seen in full-time welders have included bronchitis, siderosis, asthma, and a possible increase in the incidence of lung cancer. Pulmonary infections are increased in terms of severity, duration, and frequency among welders. Inhalation exposure to welding fumes may vary due to differences in the materials used and methods employed. The chemical properties of welding fumes can be quite complex. Most welding materials are alloy mixtures of metals characterized by different steels that may contain iron, manganese, chromium, and nickel. Animal studies have indicated that the

presence and combination of different metal constituents is an important determinant in the potential pneumotoxic responses associated with welding fumes. Animal models have demonstrated that stainless steel (SS) welding fumes, which contain significant levels of nickel and chromium, induce more lung injury and inflammation, and are retained in the lungs longer than mild steel (MS) welding fumes, which contain mostly iron. In addition, SS fumes generated from welding processes using fluxes to protect the resulting weld contain elevated levels of soluble metals, which may affect respiratory health. Recent animal studies have indicated that the lung injury and inflammation induced by SS welding fumes that contain water-soluble metals are dependent on both the soluble and insoluble fractions of the fume. This article reviews the role that metals play in the pulmonary effects associated with welding fume exposure in workers and laboratory animals.

L29 ANSWER 7 OF 16 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2005098034 EMBASE Full-text
TITLE: Dry powder inhalers for pulmonary drug delivery.
AUTHOR: Frijlink H.W.; De Boer A.H.
CORPORATE SOURCE: Dr. H.W. Frijlink, Dept. Pharmaceut. Technol./Biopharm., Groningen University, Institute for Drug Exploration, A. Deusinglaan 1, 9713 AV Groningen, Netherlands. frijlink@farm.rug.nl
SOURCE: Expert Opinion on Drug Delivery, (Nov 2004) Vol. 1, No. 1, pp. 67-86.
Refs: 146
ISSN: 1742-5247
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; General Review; (Review)
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
027 Biophysics, Bioengineering and Medical Instrumentation
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 17 Mar 2005
Last Updated on STN: 17 Mar 2005

AB The pulmonary route is an interesting route for drug administration, both for effective local therapy (asthma, chronic obstructive pulmonary disease or cystic fibrosis) and for the systemic administration of drugs (e.g., peptides and proteins). Well-designed dry powder inhalers are highly efficient systems for pulmonary drug delivery. However, they are also complicated systems, the the performance of which relies on many aspects, including the design of the inhaler (e.g., resistance to air flow and the used de-agglomeration principle to generate the inhalation aerosol), the powder formulation and the air flow generated by the patient. The technical background of these aspects, and how they may be tuned in order to obtain desired performance profiles, is reviewed. In light of the technical background, new developments and possibilities for further improvements are discussed. .COPYRGT. 2004 Ashley Publications Ltd.

L29 ANSWER 8 OF 16 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2004387826 EMBASE Full-text
TITLE: A review of the development of Respimat® Soft Mist®

Inhaler.
AUTHOR: Dalby R.; Spallek M.; Voshaar T.
CORPORATE SOURCE: Dept. of Pharmaceutical Sciences, School of Pharmacy, Univ. Maryland, 20 N. Pine St., B.. michael.spallek@ing.boehringer-ingelheim.com
SOURCE: International Journal of Pharmaceutics, (28 Sep 2004) Vol. 283, No. 1-2, pp. 1-9.
Refs: 37
ISSN: 0378-5173 CODEN: IJPHDE
PUBLISHER IDENT.: S 0378-5173(04)00341-2
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; General Review; (Review)
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 24 Sep 2004
Last Updated on STN: 24 Sep 2004

AB Respimat® Soft Mist® Inhaler (SMI) is a new generation inhaler from Boehringer Ingelheim developed for use with respiratory drugs. The device functions by forcing a metered dose of drug solution through a unique and precisely engineered nozzle (the uniblock), producing two fine jets of liquid that converge at a pre-set angle. The collision of these two jets generates the soft mist. The soft mist contains a high fine particle fraction of approximately 65 to 80%. This is higher than aerosol clouds from conventional portable inhaler devices, such as pressurised metered dose inhalers (pMDIs) and dry powder inhalers (DPIs). In addition, the relatively long generation time of the aerosol cloud (approximately 1.5 s) facilitates co-ordination of inhalation and actuation - a major problem with pMDIs. These features, together with the slow velocity of the soft mist, result in larger amounts of the drug reaching the lungs and less being deposited in the oropharynx compared with either pMDIs or DPIs. Generation of the soft mist from Respimat® SMI is purely mechanical, so propellants are not necessary. The innovative design of Respimat® SMI, using water-based drug formulations, ensures patients receive consistent and reliable doses of the drug with each actuation. The device was initially tested in scintigraphic lung deposition studies and produced encouraging results when compared with the chlorofluorocarbon-based pMDI (CFC-MDI). Subsequent clinical studies have confirmed that Respimat® SMI is effective and safe in delivering bronchodilators to patients with asthma or chronic obstructive pulmonary disease. .COPYRGT. 2004 Published by Elsevier B.V.

L29 ANSWER 9 OF 16 DRUGU COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2004-00944 DRUGU P G Full-text
TITLE: Pulmonary drug delivery. Part II: The role of inhalant delivery devices and drug formulations in therapeutic effectiveness of aerosolized medications.
AUTHOR: Labiris N R; Dolovich M B
CORPORATE SOURCE: Univ.McMaster
LOCATION: Hamilton, Ont., Can.
SOURCE: Br.J.Clin.Pharmacol. (56, No. 6, 600-12, 2003) 7 Fig. 1 Tab. 100 Ref.
CODEN: BCPHBM ISSN: 0306-5251
AVAIL. OF DOC.: Department of Medicine, McMaster University, Hamilton, Ontario, Canada. (e-mail: labir@mcmaster.ca).
LANGUAGE: English

DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AN 2004-00944 DRUGU P G Full-text
AB The role of inhalant delivery devices and drug formulations in therapeutic effectiveness of **aerosolized** medications (salbutamol, salmeterol, fluticasone propionate, ciprofloxacin, tobramycin, gentamicin, sodium cromoglycate, terbutaline and corticosteroids) are reviewed. Pulmonary delivery devices (**nebulizers**, metered-dose inhalers (MDI), and dry powder inhalers (DPI)) and bioequivalence of inhaled medications are discussed. Inhaled drug formulations (lactose carrier systems, liposomes, large porous particles, biodegradable **polymers**) are described.
ABEX The development of an inhalant therapy that is efficacious and safe depends not only on a pharmacologically active molecule, but also on a well-designed delivery system and formulation. Drug-device combinations must **aerosolize** the drug in the appropriate particle size distribution and concentration to ensure optimal deposition and dose in the desired region of the lung. The development of modern inhalation devices can be divided into 3 different categories, the refinement of the **nebulizer** and the evolution of 2 types of compact portable devices, the MDI and the DPI. HFA formulations of salbutamol, salmeterol and fluticasone propionate have been shown to be effective and safe as existing CFC formulations at equivalent dosages. Lactose has an established safety profile and improves the flow properties of the formulation necessary for reproducible filling and promoting dosing accuracy. Liposomes, as a pulmonary drug delivery vehicle, have been used as a means of delivering phospholipids to the alveolar surface for treatment of neonatal **respiratory distress** syndrome. Liposome-encapsulated ciprofloxacin, tobramycin, gentamicin, salbutamol, sodium cromoglycate, terbutaline and corticosteroids have been investigated in several animal studies. A new type of **aerosol** formulation is the large porous hollow particles, called Pulmospheres. They have low particle densities, excellent dispersibility and can be used in both MDI and DPI delivery systems. Biodegradable polymer microspheres are currently being studied as sustained-release pulmonary drug carriers. (CF/NK)

L29 ANSWER 10 OF 16 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2003134395 EMBASE Full-text
TITLE: A novel method for assessing dissolution of aerosol inhaler products.
AUTHOR: Davies N.M.; Feddah M.R.
CORPORATE SOURCE: N.M. Davies, Dept. of Pharmaceutical Sciences, College of Pharmacy, Washington State University, P.O. Box 646534, Pullman, WA 99164-6534, United States. ndavies@wsu.edu
SOURCE: International Journal of Pharmaceutics, (14 Apr 2003) Vol. 255, No. 1-2, pp. 175-187.
Refs: 21
ISSN: 0378-5173 CODEN: IJPHDE
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 17 Apr 2003
Last Updated on STN: 17 Apr 2003

AB Glucocorticoids administered by inhalation remain a first-line treatment of patients with asthma allergic rhinitis and advanced chronic obstructive pulmonary disease. Budesonide (BD), fluticasone propionate (FP) and triamcinolone acetonide (TA) have high hepatic first-pass inactivation of the swallowed fraction of the inhaled dose, whereas there is no first-pass metabolism in the lung. Hence, the lung bioavailability will determine the overall systemic absorption and the systemic bioactivity. Efficacy of inhaled agents in the respiratory tract depends on the site of deposition and physicochemical properties of the drug, which dictates rate of dissolution, absorption, metabolism and elimination. However, to date no official method exists for testing dissolution rates from inhalation aerosols. An in vitro flow through dissolution method may be useful to provide information on rate of release and determine formulation differences between products or in product development. After administration of three glucocorticoids into a cascade impactor they underwent dissolution in a flow through cell utilising water, simulated lung fluid (SLF) and modified SLF with L-α-phosphatidylcholine (DPPC) as a dissolution medium, at constant flow and temperature. Modified SLF significantly increased the dissolution rate compared with SLF alone. This novel technique appears to be a useful method of evaluating dissolution of these glucocorticoids and may also be applied to other respiratory products administered via aerosols.

L29 ANSWER 11 OF 16 BIOSIS

ACCESSION NUMBER: 2002:375430 BIOSIS Full-text
DOCUMENT NUMBER: PREV200200375430
TITLE: Mucoadhesive beclomethasone microspheres for powder inhalation: Their pharmacokinetics and pharmacodynamics evaluation.
AUTHOR(S): Sakagami, Masahiro [Reprint author]; Kinoshita, Wataru; Sakon, Kiyoyuki; Sato, Jun-ichi; Makino, Yuji
CORPORATE SOURCE: Aerosol Research Group, School of Pharmacy, Virginia Commonwealth University, P.O. Box 980533, Richmond, VA, 23298-0533, USA
msakagam@vcu.edu
SOURCE: Journal of Controlled Release, (23 April, 2002) Vol. 80, No. 1-3, pp. 207-218. print.
CODEN: JCREEC. ISSN: 0168-3659.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Jul 2002
Last Updated on STN: 10 Jul 2002

AB The feasibility of prolonging drug action and/or reducing drug dosage using mucoadhesive beclomethasone dipropionate (BDP) microspheres for powder inhalation was investigated. BDP was spray-dried from ethanol solution or aqueous suspension systems dissolving a mucoadhesive polymer, hydroxypropylcellulose (HPC); this resulted in amorphous and crystalline BDP incorporation in the HPC microspheres (aBDP/HPC and cBDP/HPC; BDP-HPC ratio=1:4), respectively. These microspheres were administered as powder aerosols to healthy or antigen-induced, asthmatic guinea pigs, and BDP's retention in the lung (pharmacokinetics) and inhibitory duration with respect to eosinophil infiltration into the airways (pharmacodynamics) were compared to those for pure crystalline BDP (cBDP; 'control'). Both BDP/HPC microspheres were prepared within a respirable-size range of 2.5-2.9 mum. BDP's aqueous solubility was increased 25 times for aBDP/HPC, compared to crystalline counterpart. Pharmacokinetic profiles for three powders were dissolution-modulated. aBDP/HPC showed rapid BDP absorption from the lung (gtoreq95% absorption for 180 min) with a greater metabolite (B17MP)

formation, compared to cBDP, primarily due to the increased dissolution of amorphous BDP. In contrast, 86.0% of BDP remained at 180 min following cBDP/HPC administration, demonstrating the prolonged BDP's retention in the lung by virtue of poor dissolution (and/or release) and retarded mucociliary clearance. As a result, while cBDP (1.37 mg/kg) significantly inhibited eosinophil infiltration into the lungs of antigen-sensitized and -challenged guinea pigs for only 1-6 h, cBDP/HPC, despite a much lower drug dosage (0.25 mg/kg), was capable of maintaining such inhibitory effects for 24 h following administration. It appeared therefore that the prolonged lung retention of BDP by the use of the HPC microspheres (cBDP/HPC) was attributed to prolonging its pharmacological duration without requiring increased drug dosage.

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ACCESSION NUMBER: 2001345651 EMBASE Full-text
TITLE: Aerosolization of cationic lipid-DNA complexes: Lipoplex characterization and optimization of aerosol delivery conditions.
AUTHOR: Guillaume C.; Delepine P.; Droal C.; Montier T.; Tymen G.; Claude F.
CORPORATE SOURCE: C. Guillaume, Centre de Biogenetique, University Teaching Hospital, ETSBO, BP 454, 29275 Brest Cedex, France. guillaume.christine@wanadoo.fr
SOURCE: Biochemical and Biophysical Research Communications, (2001) Vol. 286, No. 3, pp. 464-471.
Refs: 33
ISSN: 0006-291X CODEN: BBRCA9
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
037 Drug Literature Index
039 Pharmacy
004 Microbiology: Bacteriology, Mycology, Parasitology and Virology
006 Internal Medicine
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 18 Oct 2001
Last Updated on STN: 18 Oct 2001

AB This study deals with the development of gene therapy in the treatment of lung diseases. It reports on the use of ultrasonic nebulization to administer plasmidlipid complexes to the lungs of mice to transfect their epithelial cells. A plasmid complexed to cationic lipids was aerosolized using an ultrasonic nebulizer. We then characterized the lipoplex size and visualized the lipoplex by electron microscopy. Finally, we assessed the in vivo transgene expression in the lungs further to the aerosolization of different lipid-plasmid formulations. The nebulizer-generated particles were small and looked like a string composed of little and more or less cubic units. Transgene expression was detected in the lungs of mice further to a 20-min exposure to aerosol particles produced with the ultrasonic nebulizer. The results obtained with our optimized plasmidlipid-NaCl formulation suggest that this route can be used to administer an appropriate gene to the airways for the treatment of respiratory disorders. .COPYRGT. 2001 Academic Press.

L29 ANSWER 13 OF 16 MEDLINE on STN

ACCESSION NUMBER: 96364389 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 10160202
TITLE: Therapeutic aerosols and airway secretions.

AUTHOR: Rubin B K
CORPORATE SOURCE: St. Louis University Division of Pediatric Pulmonary Medicine, Cardinal Glennon Children's Hospital, Missouri 63104-1095, USA.
SOURCE: Journal of aerosol medicine : the official journal of the International Society for Aerosols in Medicine, (1996 Spring) Vol. 9, No. 1, pp. 123-30. Ref: 27
Journal code: 8809251. ISSN: 0894-2684.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Health Technology
ENTRY MONTH: 199610
ENTRY DATE: Entered STN: 23 Feb 2001
Last Updated on STN: 23 Feb 2001
Entered Medline: 16 Oct 1996

AB Despite common misconceptions, airway mucus is not an impermeable barrier that entraps and clears all inhaled material. To be therapeutically effective, an aerosol medication must efficiently deposit in the airway and then diffuse or translocate across the mucous barrier while retaining bioactivity. Characteristics of aerosols that affect their ability to penetrate the mucous barrier include particle charge, solubility, and size. Aerosol medications can also change the biophysical properties of secretions and influence how rapidly mucus is cleared. Surfactant is probably responsible for the displacement of inhaled particles through the mucous layer (Schurch et al., 1990). As well, exogenous surfactant has been shown to increase tracheal mucociliary clearance in anesthetized dogs (de Sanctis et al., 1994) and to improve the mucociliary clearability of secretions from babies with neonatal respiratory distress syndrome (Rubin et al., 1992). Using measurements of sputum-substrate contact angle and interfacial tension, cystic fibrosis (CF) sputum had been shown to have an abnormally high adhesion tension, (Girod et al., 1992). We assessed the in vitro effects of synthetic surfactant (Exosurf, Burroughs-Wellcome, Research Triangle Park, NC) on the physical and transport properties of sputum from 15 patients with CF and 30 patients with stable chronic bronchitis (CB). The concentration of ExosurfTM used was 13.5 mg of DPPC/ml corresponding to the reconstituted concentration for aerosol administration. The sputum was divided so that aliquots each were treated with Exosurf and amphibian Ringer's solution layered on the sputum at a concentration of 1:5 v/v for 15 min at 24 degrees C. There was a reduction in spinnability ($p < 0.0001$) in CF sputum from baseline and a fall in adhesion tension ($0.05 < p < 0.1$) with Exosurf treatment. Potentially important increases in both mucociliary and cough clearability were noted without associated changes in sputum rheology. In bronchitis sputum, surfactant reduced adhesiveness ($p < 0.01$), but this was not associated with improved clearability. Adhesive forces are involved in ciliary coupling and cough transport. This raises the possibility of using surfactant as a mucokinetic agent in the therapy of chronic suppurative lung disease.

L29 ANSWER 14 OF 16 EMBASE
ACCESSION NUMBER: 1994188912 EMBASE Full-text
TITLE: Aerosol characteristics of (99m)Tc-pentetic acid (DTPA) and synthetic surfactant (Exosurf).
AUTHOR: Coleman R.E.; MacIntyre N.; Snyder G.; Pattishall E.; Zaccardelli D.
CORPORATE SOURCE: Dr. R.E. Coleman, Duke University Medical Center, Box 3949, Durham, NC 27710, United States
SOURCE: Chest, (1994) Vol. 105, No. 6, pp. 1765-1769.

ISSN: 0012-3692 CODEN: CHETBF
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 13 Jul 1994
Last Updated on STN: 13 Jul 1994

AB This study evaluated the feasibility of using (99m)Tc-pentetic acid (DTPA) as a radioactive tracer for **aerosolized** synthetic surfactant (DPPC, cetyl alcohol, **tyloxapol**). The (99m)Tc-DTPA was admixed with surfactant and **aerosolized** using a **nebulizer** system interfaced to a ventilator with a cascade impactor attached to the endotracheal tube. **Particle size** distribution for DPPC, cetyl alcohol, and (99m)Tc-DTPA were almost identical during the 0- to 15-, 15- to 30-, and 0- to 30-min collection periods. **Tyloxapol** exhibited a unique distribution pattern with increased deposition in large (>10 μm) and small (0.65 to 1.1 μm) particles. The mass median aerodynamic diameter for all **aerosolized** components was in the respirable range of 2.1 to 2.5 μm. A mixture of (99m)Tc-DTPA with synthetic surfactant appears to be a reasonable method to evaluate surfactant deposition.

L29 ANSWER 15 OF 16 DRUGU COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1989-11825 DRUGU P T Full-text
TITLE: Correction by Lipid Preparations of Pulmonary Surfactant Inadequacy in Respiratory Failure Syndrome.
AUTHOR: Kocherginsky N M; Ryumina I I
LOCATION: Moscow, Russia
SOURCE: Khim.Farm.Zh. (22, No. 10, 1175-82, 1988) 90 Ref.
CODEN: KHFZAN ISSN: 0023-1134
AVAIL. OF DOC.: Institute of Chemical Physics, USSR Academy of Chemical Physics, Moscow, U.S.S.R.
LANGUAGE: Russian
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AN 1989-11825 DRUGU P T Full-text
AB The use of exogenous surfactants in the treatment of neonatal respiratory failure, an important cause of early death, is reviewed. Antenatal diagnosis of respiratory failure is facilitated by leakage of surfactant into amniotic fluid, where it can be assayed in terms of lipid content and surface tension. Replacement surfactants can be mixtures of pure synthetic lipids, or can be obtained by lavage of neonatal animals, generally calves; these are dried and resuspended in saline and may be sonicated to aid the formation of liposomes. **Aerosol** use combined with artificial ventilation, particularly before the first breath, appears more effective than i.v. or powder inhalation, arterial pO2 in increased, as is the ratio of pO2 in alveoli to arterial blood.
ABEX Antenatal diagnosis of respiratory failure is indicated by amniotic fluid ratios of phosphatidylcholine: sphingomelin of less than 2, total surface-active phospholipid of less than 30 uM phosphate and phosphatidylcholine of less than 20 uM phosphate; surface tension and OD560 are also effective and rapid methods. Liposomes of phosphatidylcholine alone increase pulmonary gas exchange and lung elasticity, but are not very effective; useful surfactants should lower lung wall surface tension by 2/3. A sonicated suspension of dipalmitoyl-lecithin, hexadecanol and tiloxanol gave maximum and minimum lung surface tensions on expansion and compression of 47 and 7 dyn/cm,

respectively, but was not as effective as sheep lung surfactant. Treatment of premature baboons with 100 mg/kg of sonicated cattle lung surfactant followed by ventilation with 100% O2 reduced surface tension to less thn 24-47 dyn/cm within 10 sec, increased arterial pO2, doubled the ratio of pO2 in blood and alveoli, and increased cardiac output and reduced B.P. A typical lung half-life for aerosol surfactant is 4.3 hr, whilst its rate of metabolism is similar to that of natural lipid; at optimal humidity and particle size (1.3-1.5 um) some 30% of particles reach the alveolar walls. 72 Patients received calf lung surfactant before the first breath, producing increased alveolar:arterial pO2 ratio lasting for 70 hr, and allowing a 2-fold reduction in ventilation O2 concentration, and reduced side-effects such as emphysema. (W149/WS)

L29 ANSWER 16 OF 16 MEDLINE on STN

ACCESSION NUMBER:	74080430 MEDLINE Full-text
DOCUMENT NUMBER:	PubMed ID: 5527705
TITLE:	Effect of chronic obstructive pulmonary disease on rate of deposition of aerosols in the lung during breath holding.
AUTHOR:	Palmes E D; Goldring R M; Wang C; Altshuler B
SOURCE:	Inhaled particles, (1970) Vol. 1, pp. 123-30. Journal code: 0320346. ISSN: 0301-1577.
PUB. COUNTRY:	ENGLAND: United Kingdom
DOCUMENT TYPE:	Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:	English
FILE SEGMENT:	Priority Journals
ENTRY MONTH:	197403
ENTRY DATE:	Entered STN: 10 Mar 1990 Last Updated on STN: 10 Mar 1990 Entered Medline: 13 Mar 1974

SEARCH HISTORY

=> d his ful

(FILE 'HOME' ENTERED AT 14:37:46 ON 05 DEC 2007)

FILE 'REGISTRY' ENTERED AT 14:38:20 ON 05 DEC 2007

L1 13 SEA ABB=ON (GELATIN OR CASEIN OR GUM ACACIA OR CHOLESTEROL OR TRAGACANTH OR STEARIC ACID OR BENZALKONIUM CHLORIDE OR CALCIUM STEARATE OR GLYCEROL MONOSTEARATE OR CETOSTEARYL ALCOHOL OR CETOMACROGOL OR SORBITAN OR POLYOXYETHYLENE OR CASTOR OIL OR POLYETHYLENE GLYCOLS OR POLYOXYETHYLENE STEARATES)/CN
E POLYOXYETHYLENE/CN
E POLYETHYLENE/CN
L2 1 SEA ABB=ON "POLYETHYLENE GLYCOL"/CN
L3 14 SEA ABB=ON L1 OR L2
L4 4 SEA ABB=ON (SILICON DIOXIDE OR PHOSPHATES OR SODIUM DODECYLSULFATE OR CARBOXYMETHYLCELLULOSE CALCIUM OR CARBOXYMETHYLCELLULOSE SODIUM OR METHYLCELLULOSE OR HYDROXYETHYLCELLULOSE OR HYDROXYPROPYLCELLULOSE OR HYDROXYPROPYLMETHYLCELLULOSE PHTHALATE OR CELLULOSE OR MAGNESIUM ALUMINUM SILICATE)/CN
L5 14 SEA ABB=ON (TRIETHANOLAMINE OR POLYVINYL ALCOHOL OR POLYVINYLPYRROLIDONE OR TYLOXAPOL OR POLYMERS OR POLYOXAMINE OR DEXTRAN OR LECITHIN OR SODIUM SULFOSUCCINIC ACID OR SODIUM LAURYL SULFATE OR SORBITAN OR SUCROSE STEARATE OR SUCROSE DISTEARATE OR ETHYLENE OXIDE OR PROPYLENE OXIDE OR PEO OR PBO)/CN
E PEO/CN
L6 1 SEA ABB=ON PEO/CN
E PBO/CN
L7 4 SEA ABB=ON PBO/CN
L8 30 SEA ABB=ON L3 OR L4 OR L5 OR L6 OR L7

FILE 'HCAPLUS' ENTERED AT 14:45:27 ON 05 DEC 2007

L9 470624 SEA ABB=ON GELATIN OR CASEIN OR GUM ACACIA OR CHOLESTEROL OR TRAGACANTH OR STEARIC ACID OR BENZALKONIUM CHLORIDE OR CALCIUM STEARATE OR GLYCEROL MONOSTEARATE OR CETOSTEARYL ALCOHOL OR CETOMACROGOL OR SORBITAN OR POLYOXYETHYLENE OR CASTOR OIL OR POLYETHYLENE GLYCOLS OR POLYOXYETHYLENE STEARATES
L10 901629 SEA ABB=ON L8
L11 539530 SEA ABB=ON SILICON DIOXIDE OR PHOSPHATES OR SODIUM DODECYLSULFATE OR CARBOXYMETHYLCELLULOSE CALCIUM OR CARBOXYMETHYLCELLULOSE SODIUM OR METHYLCELLULOSE OR HYDROXYETHYLCELLULOSE OR HYDROXYPROPYLCELLULOSE OR HYDROXYPROPYLMETHYLCELLULOSE PHTHALATE OR CELLULOSE OR MAGNESIUM ALUMINUM SILICATE
L12 1184265 SEA ABB=ON TRIETHANOLAMINE OR POLYVINYL ALCOHOL OR POLYVINYLPYRROLIDONE OR TYLOXAPOL OR POLYMERS OR POLYOXAMINE OR DEXTRAN OR LECITHIN OR SODIUM SULFOSUCCINIC ACID OR SODIUM LAURYL SULFATE OR SORBITAN OR SUCROSE STEARATE OR SUCROSE DISTEARATE OR ETHYLENE OXIDE OR PROPYLENE OXIDE OR PEO OR PBO
L13 2457548 SEA ABB=ON L9 OR L10 OR L11 OR L12
L14 3800 SEA ABB=ON L13 AND (?RESP? OR ?LUNG?)(4A)(?ILLNESS? OR ?DISEASE? OR ?DISTRESS?)
L15 70 SEA ABB=ON L14 AND ?SOLUBIL?
L16 257 SEA ABB=ON L14 AND (?AEROSOL? OR ?NEBULIZ?)
L17 129 SEA ABB=ON L16 AND (?ASTHMA? OR ?EMPHYSEMA? OR ?RESP?(W)?DISTRESS? OR ?BRONCHITIS? OR ?CYSTIC?(W)?FIBROSIS?)
L18 10 SEA ABB=ON L17 AND ?SOLUBIL?
L19 32 SEA ABB=ON L17 AND ?PARTICLE?(3A)?SIZE?
L20 39 SEA ABB=ON L18 OR L19

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L21          14 SEA ABB=ON  L20 AND (400 OR 300 OR 100)
                E WOOD RAY W/AU
L22          21 SEA ABB=ON  ("WOOD RAY W"/AU OR "WOOD RAY WALTER"/AU)
                E DECASTRO LAN/AU
L23           4 SEA ABB=ON  ("DECASTRO L"/AU OR "DECASTRO LAN"/AU)
                E BOSCH H WILLIAM/AU
L24          44 SEA ABB=ON  ("BOSCH H W"/AU OR "BOSCH H WILLIAM"/AU)
L25           1 SEA ABB=ON  L22 AND L23 AND L24
L26             ANALYZE L25 1 CT :       1 TERM
L27           3 SEA ABB=ON  L20 AND (PRD<19950224 OR PD<19950224)

     FILE 'MEDLINE, BIOSIS, EMBASE, DRUGU' ENTERED AT 14:57:15 ON 05 DEC 2007
L28          17 SEA ABB=ON  L20
L29          16 DUP REMOV L28 (1 DUPLICATE REMOVED)

     FILE HOME

     FILE REGISTRY
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     provided by InfoChem.

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     DICTIONARY FILE UPDATES:   4 DEC 2007  HIGHEST RN 956696-50-7

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FILE BIOSIS
FILE COVERS 1926 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1926 TO DATE.

RECORDS LAST ADDED: 28 November 2007 (20071128/ED)

BIOSIS has been augmented with 1.8 million archival records from 1926 through 1968. These records have been re-indexed to match current BIOSIS indexing.

FILE EMBASE
FILE COVERS 1974 TO 5 Dec 2007 (20071205/ED)

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